

ABSTRACT OF THE INVENTION

A catheter system facilitates blood treatments such as apheresis that require simultaneous withdrawal and return of blood to a patient at high flow rates. A multi-lumen catheter has an external coupling device connected to a pump and blood treatment device. All of the lumens are designed to be used in the blood treatment process. The catheter includes two or more lumens for withdrawing blood and a return lumen for returning treated blood. The combined flow resistance of the withdrawal lumens is less than or equal to the flow resistance of the return lumen so that the flow rate of blood through the withdrawal lumens does not require a pressure differential sufficient to collapse the lumens. High flow rates are achievable through the catheter by using a pair of withdrawal lumens instead of a single, large withdrawal lumen. The lumens may be used for general medical use when the catheter system is not being used for exchange treatments. To help reduce mixing of blood between the withdrawal lumens and the return lumens, the catheter has a beveled distal end for angling the distal ends of the withdrawal lumens away from the distal end of the return lumen. A catheter cutting tool is provided for cutting the catheter to a selected length and for providing a precise beveled distal end.